

=> d his

(FILE 'HOME' ENTERED AT 11:12:36 ON 16 SEP 2008)

FILE 'REGISTRY' ENTERED AT 11:12:48 ON 16 SEP 2008

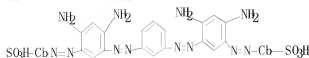
L1 STRUCTURE UPLOADED

L2 1 S L1

L3 15 S L1 FULL

=> d que l3 stat

L1 STR



Structure attributes must be viewed using STN Express query preparation.

L3 15 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 1818 ITERATIONS

15 ANSWERS

SEARCH TIME: 00.00.01

=> fil capl

FILE 'CAPLUS' ENTERED AT 11:14:16 ON 16 SEP 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 16 Sep 2008 VOL 149 ISS 12

FILE LAST UPDATED: 15 Sep 2008 (20080915/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

'FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

=> s l3

L4 20 L3

=> d l-20 bib abs hitstr

L4 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:565368 CAPLUS

DN 147:11370

TI Liquid direct dye formulations for dyeing cellulose materials, especially, paper

IN Klopp, Ingo; Etzbach, Karl-Heinz; Reichelt, Helmut

PA BASF Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 16pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007057370	A2	20070524	WO 2006-EP68376	20061113
	WO 2007057370	A3	20070809		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
	CA 2628706	A1	20070524	CA 2006-2628706	20061113
	EP 1951820	A2	20080806	EP 2006-819418	20061113
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			
PRAI	EP 2005-25196	A	20051118		
	WO 2006-EP68376	W	20061113		

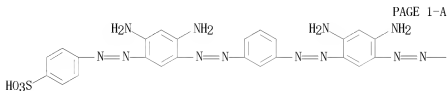
AB The invention relates to aqueous liquid formulations containing 5-30% of a dye composition that comprises 25-85% of Direct brown 44, 15-75% of Direct yellow 11 and/or a dye obtained by reducing or thermally treating direct yellow 11, 0-15% of  $\geq 1$  Direct blue dyes, and 0-10% of  $\geq 1$  direct red dyes, 0.5-15% of  $\geq 1$  alkylamines, the one, two, or three alkyl groups of which can be substituted by one or two hydroxyl groups and/or amino groups and/or be interrupted by one or two oxygen atoms having an ether function, the Na concentration of the liquid formulation not exceeding 0.3%.

IT 6252-62-6, Direct brown 44

RL: TEM (Technical or engineered material use); USES (Uses)  
 (liquid direct dye formulations for dyeing cellulose materials, especially, paper)

RN 6252-62-6 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)

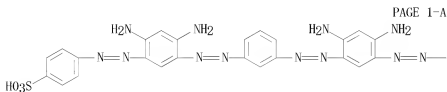


● 2 Na

PAGE 1-B



L4 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2006:826571 CAPLUS  
 DN 146:290387  
 TI Expression and characterization of the genes encoding azoreductases from  
 AU *Bacillus subtilis* and *Geobacillus stearothermophilus*  
 Sugiura, Wataru; Yoda, Tomoko; Matsuba, Takashi; Tanaka, Yoshinori;  
 Suzuki, Yasuhiko  
 CS Department of Environmental Health, Osaka Prefectural Institute of Public  
 Health, 1-3-69 Nakamichi, Higashinari-ku, Osaka, 537-0025, Japan  
 SO Bioscience, Biotechnology, and Biochemistry (2006), 70(7), 1655-1665  
 CODEN: BBBIEJ; ISSN: 0916-8451  
 PB Japan Society for Bioscience, Biotechnology, and Agrochemistry  
 DT Journal  
 LA English  
 AB Azoreductases have been characterized as enzymes that can decolorize azo  
 dyes by reducing azo groups. In this study, genes encoding proteins  
 having homol. with the azoreductase gene of *Bacillus* sp. OY1-2 were  
 obtained from *Bacillus subtilis* ATCC6633, *B. subtilis* ISW1214, and  
*Geobacillus stearothermophilus* IF013737 by polymerase chain reaction. All  
 three genes encoded proteins with 174 amino acids. The deduced amino acid  
 sequences of azoreductase homologs from *B. subtilis* ISW1214, *B. subtilis*  
 ATCC6633, and *G. stearothermophilus* IF013737 showed similarity of 53.3,  
 53.9, and 53.3% resp. to that of *Bacillus* sp. OY1-2. All three genes were  
 expressed in *Escherichia coli*, and were characterized as having the  
 decolorizing activity of azo dyes in a  $\beta$ -NADPH dependent manner. The  
 transformation of several azo dyes into colorless compds. by recombinant  
 enzymes was demonstrated to have distinct substrate specificity from that  
 of azoreductase from *Bacillus* sp. OY1-2.  
 IT 6252-62-6, Direct brown 44  
 RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological  
 study); RACT (Reactant or reagent)  
 (reaction with azoreductase; expression and characterization of genes  
 encoding azoreductases from *Bacillus subtilis* and *Geobacillus*  
*stearothermophilus*)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-  
 3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



● 2 Na

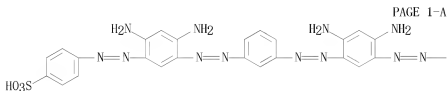
PAGE 1-B



RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2006:193711 CAPLUS  
 DN 144:275706  
 TI Liquid formulations of direct dyes  
 IN Nordmann, Gero; Reichelt, Helmut; Klopp, Ingo; Schroder, Gunter-Rudolf  
 PA BASF Aktiengesellschaft, Germany  
 SO U.S. Pat. Appl. Publ., 8 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20060042028	A1	20060302	US 2005-200109	20050810
	US 7160336	B2	20070109		
	EP 1632535	A1	20060308	EP 2005-16961	20050804
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
PRAI	EP 2004-20878	A	20040902		
OS	CASREACT 144:275706				
AB	Title formulation comprises (A) 5-25% dye composition containing 20-100 Direct Yellow 11 or reducing or thermal treated Direct Yellow 11, 0-30 blue direct dye, 0-30 red direct dye, and 0-60 parts brown direct dye; and (B) 1-25% poly-N-vinylformamide and/or polymer synthesized from mixture $\geq 1$ ethylenically unsatd. monomers (>50% of the monomers are N-vinylformamide).				
IT	6252-62-6, Direct brown 44 RL: TEM (Technical or engineered material use); USES (Uses) (liquid formulations of direct dyes)				
RN	6252-62-6 CAPLUS				
CN	Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)				



● 2 Na

PAGE 1-B

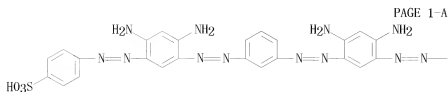


RE. CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2005:1262726 CAPLUS  
 DN 144:8092  
 TI Method for producing a liquid formulation of salts of sulphonic-acid azo dyes  
 IN Schroeder, Gunter-Rudolf; Decker, Juergen; Reichelt, Helmut; Klopp, Ingo;

Diefenbacher, Armin; Voss, Hartwig  
 PA BASF Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005113681	A1	20051201	WO 2005-EP5392	20050518
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 102004025443	A1	20051208	DE 2004-102004025443	20040519
	EP 1756230	A1	20070228	EP 2005-745170	20050518
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	CN 1957043	A	20070502	CN 2005-80016184	20050518
	MX 2006PA12950	A	20070212	MX 2006-PA12950	20061108
	US 20070232795	A1	20071004	US 2006-569263	20061117
	IN 2006CN04672	A	20070629	IN 2006-CN4672	20061219
PRAI	DE 2004-102004025443	A	20040519		
	WO 2005-EP5392	W	20050518		
AB	The invention relates to a method for producing a liquid formulation of salts of sulfonic-acid azo dyes by the coupling of at least an equimolar quantity of diazotized H <sub>2</sub> NArSO <sub>3</sub> H with products of the self-coupling products of phenylenediamine, which can be optionally substituted by Me. In said formula, Ar represents phenylene, which can be monosubstituted by sulfo, or naphthylene, which can be monosubstituted or disubstituted by sulfo and/or monosubstituted by hydroxy. According to the method, the azo dye is prepared as a basic solution without isolation of the dye, and then the solution is subjected to a nanofiltration to give a storage-stable solution. Thus, coupling of m-phenylenediamine (I) with diazotized I in water, adjusting the pH to 3 with NaOH, coupling of diazotized sulfanilic acid with the intermediate in suspension, adjusting the pH to 5 with NaOH, and adjusting the pH to 9.5 with aqueous NH <sub>3</sub> , clarifying the solution by filtration (filtration residue <0.1%) gave a dye solution, and refiltering the solution through a nanofiltration membrane with the separation layer being TiO <sub>2</sub> , pore size being 0.9 nm, and flow rate being 20.7 kg/m <sup>2</sup> h, and concentrating the filtrate by a concentration factor of 2.13 gave a C.I. Direct Brown 44 dye solution containing 97.9% solids.				
IT	6252-62-6P, C.I. Direct Brown 44				
	RL: IMF (Industrial manufacture); PREP (Preparation) (producing solns. of salts of sulfonic-acid azo dyes with nanofiltration for purification)				
RN	6252-62-6 CAPLUS				
CN	Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl[4,6-diamino-3,1-phenylene]-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)				



● 2 Na

PAGE 1-B



RE. CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:467962 CAPLUS  
DN 141:25073  
TI Method for producing aqueous solutions of azo dye sulfonic acid salts  
IN Schmitt, Michael; Reichelt, Helmut  
PA BASF Aktiengesellschaft, Germany  
S0 PCT Int. Appl., 17 pp.  
CODEN: PIXXD2  
DT Patent  
LA German  
FAN. CNT 1

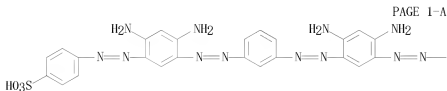
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004048478	A1	20040610	WO 2003-EP12803	20031117
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003288074	A1	20040618	AU 2003-288074	20031117
EP 1567598	A1	20050831	EP 2003-779941	20031117
EP 1567598	B1	20061115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1717454	A	20060104	CN 2003-8010446	20031117
JP 2006508209	T	20060309	JP 2004-554358	20031117
AT 345369	T	20061215	AT 2003-779941	20031117
ES 2276137	T3	20070616	ES 2003-779941	20031117
US 20060052590	A1	20060309	US 2005-534057	20050506
PRAI EP 2002-26581	A	20021128		
WO 2003-EP12803	W	20031117		
OS MARPAT 141:25073				
AB Aqueous solution of C. I. Direct Brown 44, useful for dyeing of paper, was manufactured by (a) preparing vesuvine from m-phenylenediamine, (b) coupling the vesuvine without isolation with at least an equimolar quantity of diazotized				

aminoaryl sulfonic acid  $\text{H}_2\text{NArSO}_3\text{H}$  [ $\text{Ar}$  = (sulfo)phenylene; (OH and/or sulfo-substituted) naphthylene], and (c) isolation of the dye in acidic form and subsequent dissoln. in aqueous base. For example, the diazo component solution was prepared by dissolving 170 g sulfanilic acid in solution of 157 parts 25% aqueous  $\text{NaOH}$  in 1300 parts  $\text{H}_2\text{O}$ , adding 1300 parts ice and 335 parts of 23% aqueous  $\text{NaNO}_2$  solution, adding 447 parts of 20%  $\text{HCl}$  and destroying the excess nitrite with sulfamic acid. The diazo component was added to the coupling component solution containing 173 parts vesuvine base in 2500 parts ice/ $\text{H}_2\text{O}$  mixture, the pH was adjusted to 5.0-6 (aqueous  $\text{NaOH}$ ), after the coupling reaction was completed the pH value was lowered to pH 1 with  $\text{HCl}$  and the resulting solid was separated by filtration and dried to give 360 g C.I. Direct Brown 44 containing 1.5%  $\text{NaCl}$ . Dissolving 20 g of the wet filter cake of the above dye and 5 parts 1,2-propanediol in 72 parts diluted aqueous  $\text{NaOH}$  (pH 10-12) and clarification gave a dye solution useful for coloration of paper.

IT 6252-62-6P, Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis-, disodium salt  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (aqueous solution; method for producing aqueous solns. of azo dye sulfonic acid salts)

RN 6252-62-6 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



● 2 Na

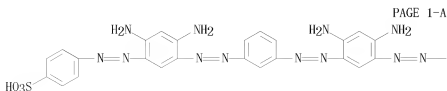
PAGE I-B



IT 25180-42-1P, C.I. Direct Brown 44  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (method for producing aqueous solns. of azo dye sulfonic acid salts)

RN 25180-42-1 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis- (9CI) (CA INDEX NAME)



PAGE 1-B



RE. CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

LA ANSWER 6 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2003:525872 CAPLUS  
DN 139:92805  
TI Light-sensitive lithographic printing plate precursor containing specific  
visible light-absorbing dye  
IN Serikawa, Takeshi  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 37 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN. CNT 1

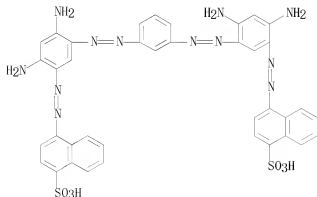
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003195490	A	20030709	JP 2001-399638	20011228
PRAI	JP 2001-399638		20011228		

AB The title printing plate precursor has a light-sensitive layer, which contains a light-to-heat converting compound, a water-insol. alkali-solubilizable resin, and a visible light-absorbing dye having a acidic group, on a support, wherein the dye maintains the acidic group after development process. The printing plate precursor provides printing plate of high contrast between image parts and background for easy inspection of the printing plate and shows the good development characteristics.

IT 6417-95-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(visible light-absorbing dye)

RN 6417-95-4 CAPLUS

CN 1-Naphthalenesulfonic acid, 4,4'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis-, disodium salt (9CI) (CA INDEX NAME)





L4 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:886055 CAPLUS

DN 137:371581

TI Coloring paper with mixtures of dyes

IN Franken, Paul; Roick, Thomas; Landsgesel, Udo; Mueller, Heinz; Strumpf, Klaus-Guenter; Klahr, Antje; Wild, Peter; Hundertmark, Claudia; Kunde, Klaus

PA Bayer AG, Germany

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1258562	A2	20021120	EP 2002-9340	20020503
	EP 1258562	A3	20030305		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10133275	A1	20021121	DE 2001-10133275	20010709
PRAI	DE 2001-10123883	A	20010516		
	DE 2001-10133275	A	20010709		

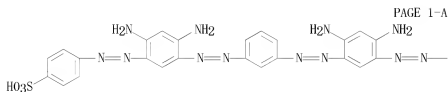
AB In the title process, which avoids the use of C.I. Basic Brown 1, mixts. of anionic dyes with absorption maximum 390-470 nm and those with absorption maximum 560-650 nm are used. Mixing pulp from 1000 kg recycled paper with 1.2 kg C.I. Direct Brown 44 and 0.4 kg C.I. Direct Blue 199 as concentrated aqueous solns. of Na salts gave a light brown paper with good resistance to bleeding and light.

IT 25180-42-1, C.I. Direct Brown 44

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(coloring paper with mixts. of dyes)

RN 25180-42-1 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis- (9CI) (CA INDEX NAME)



PAGE 1-B



L4 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:204287 CAPLUS

DN 137:141714

TI Influence of light exposure on the UV protection of direct, reactive, acid, and disperse dyes on cotton and nylon fabrics

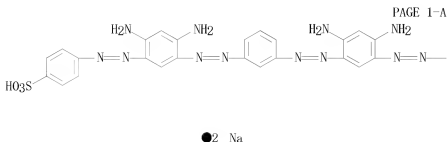
AU Veatch, Kelly D.; Gatewood, Barbara M.

CS Kansas State University, Manhattan, KS, USA

SO AATCC Review (2002), 2(2), 47-51

CODEN: ARAEBW; ISSN: 1532-8813

PB American Association of Textile Chemists and Colorists  
 DT Journal  
 LA English  
 AB The UV protection provided by fabrics can be enhanced appreciably by use of certain dyes that absorb in the UV region. This study examined the relationships among dye fading, UV transmission, and UPF values for 82 dyes on nylon and cotton. The results of this study will assist in selecting dyes that have the greatest potential for increasing UV protection and least susceptible to change during light exposure.  
 IT 6252-62-6, C.I. Direct Brown 44  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (brown dye; effect of light exposure on UV protection of direct dyes on fabrics)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl (4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



PAGE 1-B



RE, CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1997:616919 CAPLUS

DN 127:312936

OREF 127:61102a

TI High-extinction polarizers comprising liquid crystal polymers

IN Mortazavi, Mohammad; Yoon, Hyun Nam; Teng, Chia-chi

PA Hoechst Celanese Corp., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

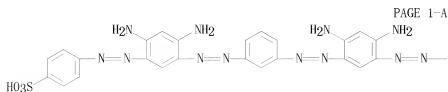
FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5667719	A	19970916	US 1995-459581	19950602
	JP 11506547	T	19990608	JP 1996-536525	19960520
PRAI	US 1995-459581	A	19950602		
	WO 1996-US7274	W	19960520		
AB	This invention provides high-extinction organic polarizers based on blends of novel liquid crystalline polymers and suitable dichroic dyes. The invention further provides a process to prepare such polarizers.				
IT	6252-62-6, Direct Brown 44				

RL: TEM (Technical or engineered material use); USES (Uses)  
(high-extinction polarizers containing liquid crystal polymers and)

RN 6252-62-6 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



PAGE 1-B



L4 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1987:441689 CAPLUS

DN 107:41689

OREF 107:6973a,6976a

TI Concentrated aqueous dye solution compositions

IN Taniguchi, Koichi; Inoue, Kaname

PA Japan Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

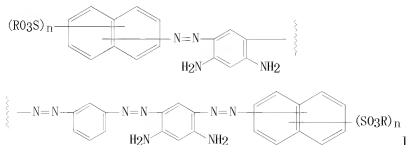
DT Patent

LA Japanese

FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61296069	A	19861226	JP 1985-136871	19850625
	JP 07000748	B	19950111		
PRAI	JP 1985-136871		19850625		

GI



AB The title comps. comprise brown dyes I [R = Li, NH<sub>2</sub>(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, NH(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>3</sub>; n = 1, 2] and water soluble polyalkylene glycols, and are

useful in manufacture of paper and leather. Thus, Na naphthionate was diazotized, the diazonium salt treated with C.I. Basic Brown 1, H<sub>2</sub>O, polyethylene glycol, and urea at 10°, the pH adjusted to 8 by (HOCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>N, and then H<sub>2</sub>O was added at 30°. This solution (A) was storage-stable for 6 mo. A pulp solution was mixed with A, a size, and anhydrous Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, and was used to prepare uniformly brown paper.

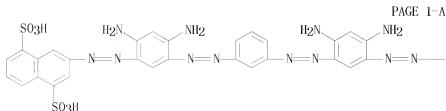
IT 109059-74-7P 109081-98-3P

RL: PREP (Preparation)

(brown, manufacture of, for cellulose pulp and leather, aqueous storage-stable compns. containing)

RN 109059-74-7 CAPLUS

CN 1,5-Naphthalenedisulfonic acid, 3,3'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis-, tetralithium salt (9CI) (CA INDEX NAME)



● 4 Li

PAGE 1-B



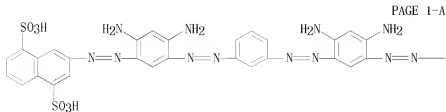
RN 109081-98-3 CAPLUS

CN 1,5-Naphthalenedisulfonic acid, 3,3'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis-, compd. with 2,2'-iminobis[ethanol] (1:4) (9CI) (CA INDEX NAME)

CM 1

CRN 109081-97-2

CMF C38 H30 N12 O12 S4



PAGE 1-B



CM 2

CRN 111-42-2

CMF C4 H11 N O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-OH

L4 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1986:573251 CAPLUS

DN 105:173251

OREF 105:27935a, 27938a

TI Scale-preventing method in vinyl polymerization

IN Koyanagi, Shunichi; Kitamura, Hajime; Shimizu, Toshihide; Kaneko, Ichiro

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

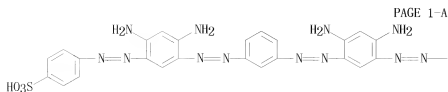
CODEN: JKXXAF

DT Patent

LA Japanese

FAN, CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61051001	A	19860313	JP 1984-171045	19840817
	JP 02036602	B	19900820		
		US 4758639	A	19880719	US 1987-94020
PRAI	JP 1984-171045	A	19840817		
	JP 1984-171046	A	19840817		
	US 1985-765803	A1	19850815		
AB	The title method in the suspension or emulsion polymerization of vinyl monomer(s) comprises (A) reducing surface roughness of the reactor wall to <5 μm and (B) coating the reactor and auxiliary equipment of monomer contact, with dye and/or pigment. Thus, a polymerization reactor (surface roughness 0.4-0.7 μm) coated with Solvent Black 5 exhibited no scale deposit even after 150 batches of polymerization of vinyl chloride, while a control (surface roughness 0.2-0.3 μm), without such a coating, was all covered with thick scale deposit after 10 batches.				
IT	6252-62-6				
	RL: DEV (Device component use); USES (Uses) (coatings containing, on polymerization reactors, for prevention of scale during vinyl polymerization in aqueous media)				
RN	6252-62-6	CAPLUS			
CN	Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)				



● 2 Na

PAGE 1-B



L4 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1983:476924 CAPLUS

DN 99:76924

OREF 99:11813a,11816a

TI Colored shaped articles such as contact lenses

IN Suminoe, Taro; Ito, Tetsuo; Kiyomatsu, Yasuhiro; Shimizu, Takao

PA Japan Synthetic Rubber Co., Ltd., Japan; Ricky Contact Lens Research Institute, Inc.

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN. CNT 1

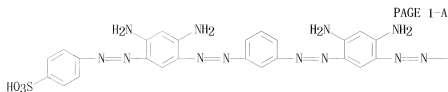
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 82026	A2	19830622	EP 1982-306735	19821216
	EP 82026	A3	19830720		
	EP 82026	B1	19870916		
	R: DE, FR, GB				
	JP 58104286	A	19830621	JP 1981-201450	19811216
	US 4494954	A	19850122	US 1982-450040	19821215
PRAI	JP 1981-201450	A	19811216		

AB Uniformly colored shaped articles such as contact lenses are prepared by immersing an acrylate polymer in a dyeing solution containing a water-soluble dye in a solvent capable of swelling the polymer and drying the article. Discoloration or fading due to oozing out of the dye is prevented by uniformly penetrating or dispersing the dye into the swollen lipophilic polymers. A polymer contact lens, prepared from acrylic acid, Bu methacrylate, and ethylene glycol dimethacrylate, was immersed in ProH and 1% MeSO<sub>3</sub>H was added and the mixture refluxed for 24 h to complete esterification and the lens then washed with ProH. The lens was immersed in a MeOH solution of C.I. Acid Blue 9 (C.I. 42090) [2650-18-2] for 1 h and the swollen and colored lens dried at 95° for 16 h and washed with H<sub>2</sub>O to remove surface dye. No discoloration occurred when the lens was boiled in distilled H<sub>2</sub>O for 7 days.

IT 6252-62-6  
RL: B10L (Biological study)  
(acrylic contact lenses coloring with)

RN 6252-62-6 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)

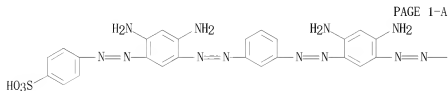


● 2 Na

PAGE 1-B



L4 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1982:474117 CAPLUS  
 DN 97:74117  
 OREF 97:12397a,12400a  
 TI Coloring agents for wood coatings and their properties  
 AU Saijo, Hiroyuki  
 CS Kanagawa-Ken Kagu Shido Cent., Kanagawa, Japan  
 SO Kogyo Toso (1980), 44, 104-17  
 CODEN: KTOSDW; ISSN: 0286-6943  
 DT Journal  
 LA Japanese  
 AB Fifty-four colorants including direct, acid, and alc.-soluble dyes and various non-grain-raising stains were applied on wood veneer specimens and subjected to fadeometer test (JIS L 0842). The results were presented as color differences as well as changes in hue, chroma, lightness, and light reflectance.  
 IT 6252-62-6  
 RL: USES (Uses)  
 (lightfastness of, on wood)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



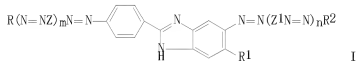
● 2 Na

PAGE 1-B



L4 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1978:512364 CAPLUS  
 DN 89:112364  
 OREF 89:17366h,17367a  
 TI Water-soluble polyazo dyes  
 IN Arsac, Aime; Frank, Pierre  
 PA Produits Chimiques Ugine Kuhlmann, Fr.  
 SO Fr. Demande, 30 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2349675	A2	19771125	FR 1976-12892	19760430
	FR 2349675	B2	19790706		
PRAI	FR 1976-12892	A	19760430		
GI					



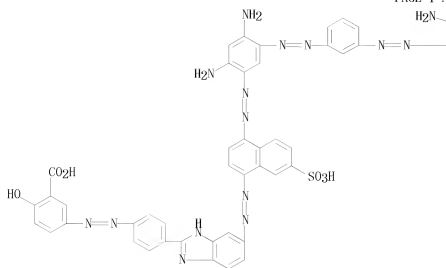
AB Polyazo dyes [I; R, R<sub>2</sub> = benzene, naphthalene, heterocyclic radical; R<sub>1</sub> = H, Cl, alkyl; Z, Z<sub>1</sub> = phenylene, naphthylene; m, n = 0, 1, 2; the mol. contains ( in R, R<sub>1</sub>, Z, Z<sub>1</sub>) 1-4 SO<sub>3</sub>H groups and 0-2 CO<sub>2</sub>H groups] were prepared and used to dye leather. Thus, 2-(4-aminophenyl)-5-aminobenzimidazole [7621-86-5] was tetrazotized and coupled with 2-amino-5-hydroxy-7-naphthalenesulfonic acid [87-02-5] to give I (R = R<sub>2</sub> = 2,5,7,1-H<sub>2</sub>N(HO) (HO<sub>3</sub>S)C<sub>10</sub>H<sub>4</sub>, R<sub>1</sub> = H, m = n = 0) [67400-98-0], fast violet on leather.

IT 67400-97-9  
 RL: USES (Uses)  
 (dye, for leather, preparation of)

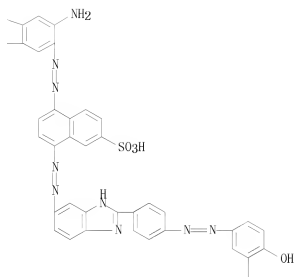
RN 67400-97-9 CAPLUS  
 CN Benzoic acid, 3,3'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo(7-sulfo-4,1-naphthalenediyl)azo-1H-benzimidazole-5,2-diyl-4,1-phenyleneazo]]bis[6-hydroxy- (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B



PAGE 2-B



CODEN: GWXXBX

DT Patent

LA German

FAN, CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2317816	A1	19731018	DE 1973-2317816	19730409
	DE 2317816	B2	19770421		
	DE 2317816	C3	19771215		
	JP 48101222	A	19731220	JP 1972-36282	19720410
	JP 51039575	B	19761028		
	US 3945836	A	19760323	US 1973-348050	19730405
	GB 1430412	A	19760331		19730406
	FR 2179953	A1	19731123		19730410
PRAI	JP 1972-36282	A	19720410		

AB Aliphatic hydrocarbon-soluble inks, useful in marking pens, are prepared by reaction of carboxylate- or sulfonate-containing dyes with quaternary ammonium or amine salts. Thus, stirring Direct Yellow 27 [51052-88-1] 7, tributyloctylammonium chloride [51052-89-2] 8, and H<sub>2</sub>O 130 parts 20 min at 40-50 deg. gives a precipitate, purified by extraction into 100 parts PhMe to give 13 parts dye. A mixture of this product 6, pentaerythritol rosin ester 15, and refined gasoline 79 parts gives a lemon-yellow ink.

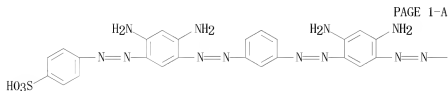
IT 6252-62-6D, Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[azo(4,6-diamino-3,1-phenylene)azo]]bis-, disodium salt, reaction products with ammonium salts

RL: USES (Uses)

(gasoline-soluble, for marking pen inks)

RN 6252-62-6 CAPLUS

CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



● 2 Na

PAGE 1-B



L4 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1972:424512 CAPLUS

DN 77:24512

OREF 77:4059a, 4062a

TI Microbiological purification of dye-industry waste water and sewage. Minimum toxic concentrations of dyes and mordant dyes for paramacia

AU Kobayashi, Hiroshi

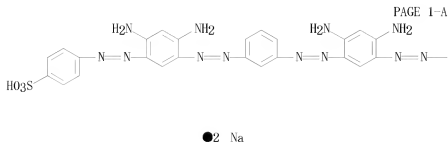
CS Suisan Coll., Minist. Agric. For., Japan

SO Mizu Shori Gijutsu (1971), 12(12), 23-30

CODEN: MSYGAO; ISSN: 0026-7015

DT Journal

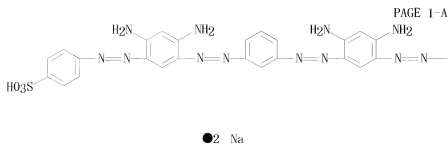
LA Japanese  
 AB Survival rates of *Paramecium* were determined as a function of concns. of 10 dyes and 2 mordants. The toxic concns. were 8-500 ppm, depending on types of dyes and mordants used.  
 IT 6252-62-6  
 RL: PRP (Properties)  
 (toxicity of, to *Paramecium*)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



PAGE 1-B



L4 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1964:46215 CAPLUS  
 DN 60:46215  
 OREF 60:8182g-h, 8183a  
 TI Stability of direct dyes at temperatures above 100°  
 AU Zeidman, Rita; Calin, C.; Bazavan, I.; Brenman, Simona; Grindea, Misilim  
 CS Polytech. Inst., Iasi, Rom.  
 SO Buletinul Institutului Politehnic din Iasi (1962), 8(3-4), 445-50  
 CODEN: BUPIAE; ISSN: 0032-6100  
 DT Journal  
 LA Unavailable  
 AB The behavior of 48 direct dyes at >100° was investigated. Modifications in the spectral characteristics (CA 57, 6069h) and results of actual dyeing of cotton fibers in neutral (0.5 and 1 h.) and in alkaline (4% Na2CO3, 0.5 h.) media were determined in the presence of 10% Na2SO4-all at normal temperature and at 120°. The heat resistance of the dyes was lower in alkaline than in neutral media. In the latter, the heat resistance of the direct dyes was remarkable, only Direct Brilliant Orange and Direct Resistant Ruby L2A being unusable. The results showed that the benzidine disazo and the stilbene dyes have remarkable heat resistance, while the dyes derived from the carbonyl J acid have a lower stability. In general, stability of the dyes was the same when heated in the absence or in the presence of cotton, but in some cases the heat resistance was improved by the cotton. The role of the secondary dyes in the final behavior of the products examined was also discussed.  
 IT 6252-62-6, C.I. Direct Brown 44  
 (heat stability of)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



PAGE 1-B



L4 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1961:67667 CAPLUS

DN 55:67667

OREF 55:12857e-f

TI Improvement of the quality of direct dyes

AU Legradi, Laszlo; Kovacs, Tibor

CS Veszprem County Dye Factory, Fuzfogyartelep, Hung.

SO Magyar Kemiai Folyoirat (1961), 67, 1-3

CODEN: MGKFA3; ISSN: 0025-0155

DT Journal

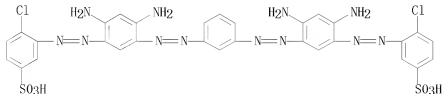
LA Unavailable

AB The structure of Dianil Brown (C. I. Direct Brown 44) was altered by using 1-chloro-2-amino-4-benzenesulfonic acid (I) in the place of sulfanilic acid. I was prepared in 90% yield by sulfonating and nitrating chlorobenzene, followed by reduction. Light-fastness was improved, other fastness values remained the same.

IT 117881-07-9P, Benzenesulfonic acid, 3,3'-[m-phenylenebis[azo(4,6-diamino-m-phenylene)azo]]bis[4-chloro-  
RL: PREP (Preparation)  
(preparation of)

RN 117881-07-9 CAPLUS

CN Benzenesulfonic acid, 3,3'-[m-phenylenebis[azo(4,6-diamino-m-phenylene)azo]]bis[4-chloro- (6CI) (CA INDEX NAME)



L4 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1956:38396 CAPLUS

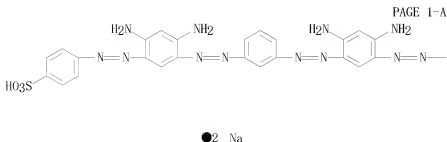
DN 50:38396

OREF 50:7463f-h

TI Paper chromatography of reduction products of dyes from benzidine and its derivatives

AU Kitahara, Shinya; Hiyama, Hachiro

- CS Osaka City Ind. Research Inst.  
 SO Kogyo Kagaku Zasshi (1955), 58, 620-5  
 CODEN: KGKZA7; ISSN: 0368-5462  
 DT Journal  
 LA Unavailable  
 AB cf. C.A. 49, 14327d. Twenty-seven kinds of benzidine dyes were subjected to acid reduction with tin chloride and examined by paper chromatog. by use of FeCl<sub>3</sub> or NH<sub>4</sub>OH as coloring reagent and BuOH-HCl (4:1) mixture or 2% HCl aqueous solution as developing agent. The color and R<sub>F</sub> values of reduction products are tabulated. The names of dyes examined are: Congo red, Benzopurpurin 4B, Direct Blue 2B, Diamine Sky Blue, Direct Violet RN, Acetopurpurine 8B, Coupling Orange Extra, Pyramine Orange R, Toluylene Orange G, Fast Red F, Benzo Orange R, Direct Brown M, Direct Red G, Benzo Fast Red GI, Congo Orange R, Benzo Brown CB, Congo Corinth G, Brilliant Bordeaux NS, Direct Black BH, Dia Mineral Blue CVB, Congo Rubin, Direct Brown 3G, Direct Green G, Direct Dark Green, Congo Brown G, Direct Fast Black HW, Deep Black Extra.  
 IT 6252-62-6, Direct Brown 3G  
 (chromatog. of reduction products of)  
 RN 6252-62-6 CAPLUS  
 CN Benzenesulfonic acid, 4,4'-[1,3-phenylenebis[2,1-diazenediyl(4,6-diamino-3,1-phenylene)-2,1-diazenediyl]]bis-, sodium salt (1:2) (CA INDEX NAME)



PAGE 1-B

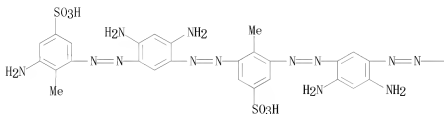


- L4 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1947:3579 CAPLUS  
 DN 41:3579  
 OREF 41:724e-i, 725a-d  
 TI Azo compounds and their intermediates. XXVIII. The structure of toluylene brown G  
 AU Ruggli, Paul; Fischer, Roland  
 CS Univ. Basel  
 SO Helvetica Chimica Acta (1945), 28, 445-50  
 CODEN: HCACAV; ISSN: 0018-019X  
 DT Journal  
 LA German  
 GI For diagram(s), see printed CA Issue.  
 AB cf. C.A. 40, 4037.1. Toluylene brown G (I), to which has been ascribed the formula (II), is prepared in the usual manner by coupling m-C6H4(NH<sub>2</sub>)<sub>2</sub> (IV) with tetrazotized 3,5-diamino-p-toluene-sulfonic acid (V) and found to have an atomic ratio N:S of 6:0.99, verifying the equimolar ratio demanded by the formula. However, II contains a heterocyclic 10-membered ring which is improbable from theoretical considerations. Diffusion

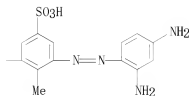
expts. indicate that I is an ion-colloid rather than a simple mol. Therefore, a chain structure (III) seems more probable than a ring configuration. Reductive splitting would not clarify the problem because either structure would yield the same products. Blocking one of the amino groups of V by acetylation to form monoacetyl-3,5-diamino-p-toluenesulfonic acid (VI), C<sub>9</sub>H<sub>12</sub>O<sub>4</sub>N<sub>2</sub>S. 2H<sub>2</sub>O, followed by diazotization, produces a compound which couples with IV to yield a brick-red monoazo dye (VII) which on hydrolysis with 5% NaOH for 6 hrs. gives the brown dye (VIII). VIII ("opentoluylene brown") is not a substantive dye but has the characteristics of a wool dye. VIII does become substantive when it is converted into a disazo dye by the addition of another mol. of IV to produce (IX) (Phd.N<sub>2</sub>.Tds.N<sub>2</sub>.Phd) [Phd = phenylenediamine residue;Tds = diaminotoluenesulfonic acid residue]. Coupling of diazotized VI with VIII produces a mono-Ac disazo dye (X) (AcTds.N<sub>2</sub>.Phd.N<sub>2</sub>.Tds). Diazotization of X followed by coupling with IX gives a compound which on deacetylation yields a pentakisazo dye (XI) (Tds.N<sub>2</sub>.Phd.N<sub>2</sub>.Tds.N<sub>2</sub>.Phd.N<sub>2</sub>.Tds.N<sub>2</sub>.Phd). Thus XI is III with a definite chain length. The phys. and chemical properties of I are very much like those of XI, confirming the chainlike structure assigned to it.

- IT 859493-74-6P, p-Toluenesulfonic acid, 3-[2,4-diamino-5-(3-amino-5-sulfo-o-tolylazo)phenylazo]-5-[2,4-diamino-5-[3-(2,4-diaminophenylazo)-5-sulfo-o-tolylazo]phenylazo]-  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 859493-74-6 CAPLUS  
 CN Benzenesulfonic acid, 3-[2-[2,4-diamino-5-[2-(3-amino-2-methyl-5-sulphophenyl)diazenyl]phenyl]diazenyl]-5-[2-[2,4-diamino-5-[2-[3-[2-(2,4-diaminophenyl)diazenyl]-2-methyl-5-sulphophenyl]diazenyl]phenyl]diazenyl]-4-methyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



=> => d que k8 stat  
 'k8' IS NOT VALID HERE

=> d que l8 stat  
 L5 196 SEA FILE-CAPLUS ABB=ON PLU=ON "SCHMITT MICHAEL"/AU  
 L6 136 SEA FILE-CAPLUS ABB=ON PLU=ON "REICHELT HELMUT"/AU  
 L7 330 SEA FILE-CAPLUS ABB=ON PLU=ON L5 OR L6  
 L8 4 SEA FILE-CAPLUS ABB=ON PLU=ON L7 AND (VESUVIN OR (BASIC  
 BROWN 1) OR (BISMARCK BROWN) OR (DIRECT BROWN 44))

=> d 1-4 bib abs

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2007:565368 CAPLUS  
 DN 147:11370  
 TI Liquid direct dye formulations for dyeing cellulose materials, especially,  
 paper  
 IN Klopp, Ingo; Eitzbach, Karl-Heinz; Reichelt, Helmut  
 PA BASF Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 16pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007057370	A2	20070524	WO 2006-EP68376	20061113
WO 2007057370	A3	20070809		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
CA 2628706	A1	20070524	CA 2006-2628706	20061113
EP 1951820	A2	20080806	EP 2006-819418	20061113
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			
PRAI EP 2005-25196	A	20051118		
WO 2006-EP68376	W	20061113		

AB The invention relates to aqueous liquid formulations containing 5-30% of a dye composition that comprises 25-85% of Direct brown 44, 15-75% of Direct yellow 11 and/or a dye obtained by reducing or thermally treating direct yellow 11, 0-15% of  $\geq 1$  Direct blue dyes, and 0-10% of  $\geq 1$  direct red dyes, 0.5-15% of  $\geq 1$  alkylamines, the one, two, or three alkyl groups of which can be substituted by one or two hydroxyl groups and/or amino groups and/or be interrupted by one or two oxygen atoms having an ether function, the Na concentration of the liquid formulation not exceeding 0.3%.

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2006:193711 CAPLUS  
 DN 144:275706  
 TI Liquid formulations of direct dyes  
 IN Nordmann, Gero; Reichelt, Helmut; Klopp, Ingo; Schroder, Gunter-Rudolf  
 PA BASF Aktiengesellschaft, Germany  
 SO U.S. Pat. Appl. Publ., 8 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20060042028	A1	20060302	US 2005-200109	20050810
US 7160336	B2	20070109		
EP 1632535	A1	20060308	EP 2005-16961	20050804
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,			

BA, HR, IS, YU  
 PRAI EP 2004-20878 A 20040902  
 OS CASREACT 144:275706  
 AB Title formulation comprises (A) 5-25% dye composition containing 20-100 Direct Yellow 11 or reducing or thermal treated Direct Yellow 11, 0-30 blue direct dye, 0-30 red direct dye, and 0-60 parts brown direct dye; and (B) 1-25% poly-N-vinylformamide and/or polymer synthesized from mixture  $\geq 1$  ethylenically unsatd. monomers (>50% of the monomers are N-vinylformamide).  
 RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2005:1262726 CAPLUS  
 DN 144:8092  
 TI Method for producing a liquid formulation of salts of sulphonic-acid azo dyes  
 IN Schroeder, Gunter-Rudolf; Decker, Juergen; Reichelt, Helmut; Klopp, Ingo; Diefenbacher, Armin; Voss, Hartwig  
 PA BASF Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005113681	A1	20051201	WO 2005-EP5392	20050518
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004025443	A1	20051208	DE 2004-102004025443	20040519
EP 1756230	A1	20070228	EP 2005-745170	20050518
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1957043	A	20070502	CN 2005-80016184	20050518
MX 2006PA12950	A	20070212	MX 2006-PA12950	20061108
US 20070232795	A1	20071004	US 2006-569263	20061117
IN 2006CN04672	A	20070629	IN 2006-CN4672	20061219
PRAI DE 2004-102004025443	A	20040519		
WO 2005-EP5392	W	20050518		
AB				

The invention relates to a method for producing a liquid formulation of salts of sulfonic-acid azo dyes by the coupling of at least an equimolar quantity of diazotized H<sub>2</sub>NArSO<sub>3</sub>H with products of the self-coupling products of phenylenediamine, which can be optionally substituted by Me. In said formula, Ar represents phenylene, which can be monosubstituted by sulfo, or naphthylene, which can be monosubstituted or disubstituted by sulfo and/or monosubstituted by hydroxy. According to the method, the azo dye is prepared as a basic solution without isolation of the dye, and then the solution is subjected to a nanofiltration to give a storage-stable solution. Thus, coupling of m-phenylenediamine (I) with diazotized I in water, adjusting the pH to 3 with NaOH, coupling of diazotized sulfanilic acid with the intermediate in suspension, adjusting the pH to 5 with NaOH, and adjusting the pH to 9.5 with aqueous NH<sub>3</sub>, clarifying the solution by filtration (filtration residue <0.1%) gave a dye solution, and refiltering the solution through a nanofiltrating membrane with the separation layer being TiO<sub>2</sub>, pore size being 0.9 nm, and flow rate being 20.7 kg/m<sup>2</sup> h, and concentrating the



filtrate by a concentration factor of 2.13 gave a C.I. Direct Brown 44 dye solution containing 97.9% solids.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:467962 CAPLUS  
DN 141:25073  
TI Method for producing aqueous solutions of azo dye sulfonic acid salts  
IN Schmitt, Michael; Reichelt, Helmut  
PA BASF Aktiengesellschaft, Germany  
S0 PCT Int. Appl., 17 pp.  
CODEN: PIXXD2

DT Patent  
LA German  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004048478	A1	20040610	WO 2003-EP12803	20031117
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003288074	A1	20040618	AU 2003-288074	20031117
EP 1567598	A1	20050831	EP 2003-779941	20031117
EP 1567598	B1	20061115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1717454	A	20060104	CN 2003-80104446	20031117
JP 2006508209	T	20060309	JP 2004-554358	20031117
AT 345369	T	20061215	AT 2003-779941	20031117
ES 2276137	T3	20070616	ES 2003-779941	20031117
US 20060052590	A1	20060309	US 2005-534057	20050506
PRAI EP 2002-26581	A	20021128		
WO 2003-EP12803	W	20031117		

OS MARPAT 141:25073

AB Aqueous solution of C.I. Direct Brown 44, useful for dyeing of paper, was manufactured by (a) preparing vesuvine from m-phenylenediamine, (b) coupling the vesuvine without isolation with at least an equimolar quantity of diazotized aminoaryl sulfonic acid H2NArSO3H [Ar = (sulfo)phenylene; (OH and/or sulfo-substituted) naphthylene], and (c) isolation of the dye in acidic form and subsequent dissoln. in aqueous base. For example, the diazo component solution was prepared by dissolving 170 g sulfanilic acid in solution of 157 parts 25% aqueous NaOH in 1300 parts H2O, adding 1300 parts ice and 335 parts of 23% aqueous NaNO2 solution, adding 447 parts of 20% HCl and destroying the excess nitrite with sulfamic acid. The diazo component was added to the coupling component solution containing 173 parts vesuvine base in 2500 parts ice/H2O mixture, the pH was adjusted to 5.0-6 (aqueous NaOH), after the coupling reaction was completed the pH value was lowered to pH 1 with HCl and the resulting solid was separated by filtration and dried to give 360 g C.I. Direct Brown 44 containing 1.5% NaCl. Dissolving 20 g of the wet filter cake of the above dye and 5 parts 1,2-propanediol in 72 parts diluted aqueous NaOH (pH 10-12) and clarification gave a dye solution useful for coloration of paper.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his full

(FILE 'HOME' ENTERED AT 11:12:36 ON 16 SEP 2008)

FILE 'REGISTRY' ENTERED AT 11:12:48 ON 16 SEP 2008

L1           STRUCTURE UPLOADED  
            D  
L2           1 SEA SSS SAM L1  
            D SCAN  
L3           15 SEA SSS FUL L1  
            D QUE L3 STAT

FILE 'CAPLUS' ENTERED AT 11:14:16 ON 16 SEP 2008

L4           20 SEA ABB-ON PLU-ON L3  
            D 1-20 BIB ABS HITSTR  
            E SCHMITT MICHAEL/AU  
L5           196 SEA ABB-ON PLU-ON "SCHMITT MICHAEL"/AU  
            E REICHELTL HELMUT/AU  
L6           136 SEA ABB-ON PLU-ON "REICHELTL HELMUT"/AU  
L7           330 SEA ABB-ON PLU-ON L5 OR L6  
L8           4 SEA ABB-ON PLU-ON L7 AND (VESUVIN OR (BASIC BROWN 1) OR  
            (BISMARCK BROWN) OR (DIRECT BROWN 44))  
            D QUE L8 STAT  
            D 1-4 BIB ABS

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 SEP 2008 HIGHEST RN 1049628-87-6

DICTIONARY FILE UPDATES: 15 SEP 2008 HIGHEST RN 1049628-87-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

FILE CAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 16 Sep 2008 VOL 149 ISS 12

FILE LAST UPDATED: 15 Sep 2008 (20080915/ED)

Caplus now includes compIete InternatiOnal Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply.  
They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> log h

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	151.16	330.19
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-19.20	-19.20

SESSION WILL BE HELD FOR 120 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 11:23:05 ON 16 SEP 2008